Message

From: Reddy - CDPHE, Patrick [patrick.reddy@state.co.us]
Sent: 6/3/2014 3:42:20 PM
To: Russ Schnell (NOAA Federal) [russell.c.schnell@noaa.gov]
CC: Tonnesen, Gail [Tonnesen.Gail@epa.gov]; Thomas Ayers - NOAA Federal [thomas.ayers@noaa.gov]; Richard Lataitis - NOAA Federal [richard.lataitis@noaa.gov]; Bruce Bartram - NOAA Affiliate [bruce.bartram@noaa.gov]; Daniel Wolfe - NOAA Affiliate [daniel.wolfe@noaa.gov]; Patrick Cullis [Patrick.Cullis@noaa.gov]; Emrys Hall [Emrys.Hall@noaa.gov]; Samuel J Oltmans [Samuel.J.Oltmans@noaa.gov]; Brad Pierce [brad.pierce@noaa.gov]
Subject: Re: FW: Stratospheric O3 intrusion likely to affect Colorado surface concentrations tomorrow

Hi Russ,

Here are links to Brad Pierce's product pages:

http://cimss.ssec.wisc.edu/idea-i/USozone/index.php?action=view_animation&params=sensor,node,date&param_values=CrIS,Ascend,20140602

Select the date and the CrIS retrieval option, and then animate. This provides forward trajectories from points at about 500 mb that have O3 above 80 ppb. The trajectories start to turn pink/red when they come within 200 mb of the surface. This tool is sensitive to the retrieval. If clouds are in the way, for example, it can miss a "source region".

http://raqms-ops.ssec.wisc.edu/

Brad may have additional product links/info for you. Also, we can try to copy someone in your circle whenever our intrusion e-mail forecast chatter ramps up.

Pat

On Tue, Jun 3, 2014 at 9:16 AM, Russ Schnell (NOAA Federal) <russell.c.schnell@noaa.gov> wrote:

Dear Gail and Patrick,

The Global Monitoring Division puts up ozonesondes weekly from a site between Boulder and Broomfield. We could put one up Wednesday or Thursday AM that may be able to catch the intrusion.

Could you please provide us a link to the model projecting the timing and location of the intrusions so that we can link into this and future intrusions.

On 6/3/2014 7:39 AM, Tonnesen, Gail wrote:

> The BAO webpage is showing real-time O3 data again. There is nothing unusual in the data yet, but perhaps we will see indications of the intrusion later today.
>
> Thanks!

Gail

303-312-6113

From: Thomas Ayers - NOAA Federal [mailto:thomas.ayers@noaa.gov]
Sent: Monday, June 02, 2014 4:33 PM
To: Richard Lataitis - NOAA Federal
Cc: Bruce Bartram - NOAA Affiliate; Russell Schnell - NOAA Federal; Reddy - CDPHE, Patrick; Daniel Wolfe - NOAA Affiliate; Tonnesen, Gail
Subject: Re: FW: Stratospheric O3 intrusion likely to affect Colorado surface concentrations tomorrow

Hi Rich,

I'm not sure of the measurements but am planning on going to the tower tomorrow. Bruce will probably have the best answer since Dan is still out on vacation. If I don't see Bruce at the tower I'll call and ask him if there's anything I can do.

Tom

On Mon, Jun 2, 2014 at 1:57 PM, Richard Lataitis - NOAA Federal <richard.lataitis@noaa.gov> wrote:

Bruce, Tom or Russ, Can any of you help answer this question? Thanks, Rich

On Mon, Jun 2, 2014 at 12:57 PM, Tonnesen, Gail <Tonnesen.Gail@epa.gov> wrote:

Hi Rich,

I noticed that the BAO tower webpage has not reported any data since about 22:00 May 31, and that no surface O3 data has been reported during May. Do you know if surface O3 data is being collected? There is a possibility of a stratospheric intrusion Tuesday-Wednesday this week, and the real time BAO date is very useful.

Thanks,
Gail

Gail Tonnesen, Ph.D.
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Denver, CO 80202
303-312-6113

From: Reddy - CDPHE, Patrick [mailto:patrick.reddy@state.co.us]
Sent: Monday, June 02, 2014 10:41 AM
To: Tonnesen, Gail; Brad Pierce; Andrew Langford-NOAA Federal; pfister@ucar.edu; Pierce', 'GORDON; Christoph Senff; Crawford, James H. (LARC-E303); Pickering, Kenneth E. (GSFC-6140); Frank M. Flocke <ffl@ucar.edu>; Scott Landes - CDPHE
Subject: Stratospheric O3 intrusion likely to affect Colorado surface concentrations tomorrow

Hi all,

A potent little shortwave is likely to bring streamers of stratospheric air to 600 mb over Colorado on Tuesday. Afternoon mixing to about 550 mb and lee wave phenomena in the lee of the Divide will allow some of this air to mix to ground-level sites beginning at 18Z on Tuesday June 3, with the highest impacts expected at Gothic, RMNP, Manitou Springs, the Air Force Academy, and basically most of the Front Range foothills and plains sites. The streamers should also impact southeast WY. There could be impacts in some areas of Utah as well.

The wildcard at the moment is how much lower stratospheric O3 is available for entrainment into the streamers. Brad Pierce's IDEA International tool confirms the possibility of intrusion impacts on Tuesday, but it looks like the center of this moderate sized trough which is off of California is not yet covered by GOES or GOME O3 products.

If we think there is a possibility of exceedances on Tuesday, we will issue an advisory or action day for O3 (later today or tomorrow AM). Blowing dust advisories are also being considered.

Regards,

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